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| 09/865,464 | 05/29/2001 | Charles W. Kellum | 13499CIP | 4648 |
| 293 | 7590 | 12/15/2004 | EXAMINER | |
| Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave. Suite 406 Alexandria, VA 22314 | | | ADAMS, JONATHAN R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2134 | |

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/865,464

Applicant(s)

KELLUM, CHARLES W.

Examiner

Jonathan R Adams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. As to claim(s) 14:

Claim 14 recites the limitation for "adaptive processing means for removing limitations of binary computation". It is unclear what is meant by "the limitations of binary computation".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 19, and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Schnurer et al., US Patent No 5842002 (hereafter referred to as '002).

As to claim(s) 1, 7:

'002 teaches a secure proxy system for providing virus protection from to a protected host comprising:

- Connecting an intermediate domain computer between external data source and protected system / Data source → emulation box → protected computer system (Fig 1, Elements 24, 48, 28, '002)
- Receive initial data including the information and any undesirable data transmitted from the external information source / the device reads an incoming data stream from one or more outside sources (Col 6, Line 27, '002)
- Intermediate device processes initial data set into second data set by executing any programs contained within / the executable is forced to run (Col 7, Line 47, '002)
- Extracting the information from second data to screen out undesirable data / If anything within the environment changes it is determined that a virus does exist (Col 7, Line 48, '002)
- Passing the extracted information to the protected system / Converting the extracted information to datasets that are optimally processable by the protected system/ Following processing, data packets are re-assembled and converted to its original hardware and software protocol by the IO interface before being output to the protected computer system (Col 8, Line 46-49, '002)
- Eliminating the initial data set from the intermediate computer / If no virus is detected, the write or close command is issued (Col 8, Line 56-58, '002)

- Resetting the intermediate computer device to a non-contaminated state / Close command (Col 8, Line 58, '002)

3. As to claim(s) 2:

Selecting an internal data set that is to react with the initial data set / Processing the initial and internal data sets within the intermediate device / detect viruses changes to executables (Col 8, Line 17, '002)

Transferring the internal data set to the intermediate domain device / the executables most first have been transferred to the intermediate device

4. As to claim(s) 3:

Filtering the selected internal data set for authorized transfer to the intermediate domain device / If no virus is detected, the write or close command is issued (Col 8, Line 56-58, '002), Data sets potentially containing viruses are filtered for authorized content

5. As to claim(s) 4:

Buffering the signal containing the initial data set in the intermediate device / I/O buffer means / Transforming the format of the signal containing the initial data set into a different format / I/O buffer means responsive to said emulation means for reassembling said converted data back into said external data stream protocol (Col 10, Line 27, '002)

6. As to claim(s) 5:

First and different formats are selected from a group of formats including analogue, digital, printed, telephone, video, optical, facsimile, media, text or font, EBCDIC and ASCII, other forms of electromagnetic and electro-optic signals / An example of a communication link 24 are a Local Area Network (LAN) (i.e. Novell), Wide Area Network (WAN) (i.e. networked LANs), the telephone network (i.e. Modems), radio frequency (RF) type cellular network or some type of data storage device (i.e. floppy diskette, hard disk, tape, CD-ROM, magneto-optical, etc.) (Col 6, Line 27, '002)

7. As to claim(s) 6:

Connecting the intermediate device to a backplane of a computer system operating the protected system / Board level CPU (Col 6, Line 12, '002)

8. As to claim(s) 8:

intermediate device is selected from a group of computer hardware devices, including single board computers, modified single board computers, embedded microprocessors, embedded microcontrollers, personal computers, webtv units, portable/laptop computer systems, mainframe computers, network computer systems, network of computers, and a plurality of such devices, whereby a modified single board computer device includes a "commercial of the shelf" (COTS) single board computer device modified to include an embedded "non-transparent" bus-bridge device which permits the single board computer to operate as an add-in card to the bus / The Central Processing Unit (CPU)

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12 can be any computing device (i.e. Intel, Motorola, Paramid, National Semicondutor or Texas Instruments microprocessor, multiple chip set CPUs, board level CPUs, etc.) (Col 6, Line 9, '002)

9. As to claim(s) 9:

Identifying a protected system for authorized access to the intermediate device / means for identifying a protected system for authorized access / the protected device in use acts as the identified authorized device (Fig 3, Element 42, '002)

10. As to claim(s) 10:

All means are mounted to a bus of the protected system / Board level CPUs (Col 6, Line 13, '002)

11. As to claim(s) 11:

Plurality of intermediate devices and means for identifying authorized intermediate devices in a network / Board level CPUs (Col 6, Line 13, '002), if intermediate devices are using a board level CPU implementation, the summation of each instance of the invention of '002 constitutes a plurality

12. As to claim(s) 19:

protected system is a router, switch, hub, network device, wireless device, mobile device, or handheld device / File server (Col 6, Line 48, '002)

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analyze incoming and outgoing data sets and delete improper data sets / If no virus is detected, the write or close command is issued (Col 8, Line 56-58, '002), Data sets potentially containing viruses are filtered

13. As to claim(s) 21:

All means embodied as system-on-chip device includes mixed-signal components, wireless technology, application specific integrated circuit (ASIC) devices, and reconfigurable logic unit (RLU) devices which provide fault-tolerant capability and reconfigurable-computing capability / An example of a communication link 24 are a Local Area Network (LAN) (i.e. Novell), Wide Area Network (WAN) (i.e. networked LANs), the telephone network (i.e. Modems), radio frequency (RF) type cellular network or some type of data storage device (i.e. floppy diskette, hard disk, tape, CD-ROM, magneto-optical, etc.) (Col 6, Line 27, '002), The Central Processing Unit (CPU) 12 can be any computing device (i.e. Intel, Motorola, Paramid, National Semiconductor or Texas Instruments microprocessor, multiple chip set CPUs, board level CPUs, etc.) (Col 6, Line 9, '002)

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 12-18 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over '002 in view of Aziz et al., US Patent No 6119234 (hereafter referred to as '234).

As to claim(s) 12:

16. '002 teaches a secure proxy system for providing virus protection from to a protected host. '002 does not teach for the secure proxy system to use a device-identification-number authentication and data set labeling capability. '234 teaches a secure proxy system encrypted host communication using client configured address and key for intermediate device access (Col 4, Line 1-8, '234). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the data labeling address authorization and encryption of '234 with the invention of '002. One of ordinary skill in the art would have been motivated to use the data labeling address authorization and encryption of '234 with the invention of '002 because the combination provides an increased level of security to the protected host system.

17. As to claim(s) 13:

Tranceiving and processing patterns of information representing labeled data sets that appear as noise to unauthorized receivers and cannot be correctly generated by unauthorized receivers / encryption (Col 4, Line 6, '234)

18. As to claim(s) 14:

Tranceiving is operable in telecommunication framework and process patterns / Another application of the trapping device 10 is shown in FIG. 4. In this scenario, data traffic passing through the telecommunications network (Col 6, Lines 50-52, '002)

19. As to claim(s) 15:

Data flow control based on DIN of system / Network configurations including the Internet (Col 4, Line 50, '234), Internet uses IP based data flow control

20. As to claim(s) 16:

Means to derive a point of origin of signals received / Network configurations including the Internet (Col 4, Line 50, '234), Internet uses source/destination IP addressing data

21. As to claim(s) 17:

Processing means authenticate contents of signals received / signature resource record can be used to authenticate the data in other resource records (Col 5, Line 67, '234)

As to claim(s) 18:

22. '002 as modified above teaches a secure proxy system for providing virus protection from to a protected host using client configured address and key for intermediate device access (Col 4, Line 1-8, '234). '002 as modified above does not specifically teach for the proxy to handle data authentication. '234 teaches the use of authentication signatures for use with the secure exchange proxy system. It would have

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been obvious to a person of ordinary skill in the art at the time of invention to include the authentication signatures of '234 with the combined proxy functionality of '002 and '234. One of ordinary skill in the art would have been motivated to include the authentication signatures of '234 with the combined proxy functionality of '002 and '234 because the secure proxy exchanger is designed to provide secure communication and would therefore benefit from the added functionality of signature authentication.

23. As to claim(s) 20:

Generate/tranceive/analyze status information with a plurality of protected systems to maintain optimal passing of data sets / Configuring clients with the address of protected hosts (Col 4, Line 18-21, '234)

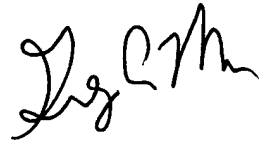
Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R Adams whose telephone number is (571)272-3832. The examiner can normally be reached on Monday – Friday from 10am to 6pm.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is (571)272-3838.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to read "Greg Morse", is written in a cursive style.

GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100